Annual Report of Division of Sanitary Engineering—Georgia Department of Public Health, 1934 —*Malaria Control,* pp. 18–25, inclusive.

A narrative report with tabulation of work accomplished on drainage, and employment figures, by counties.

The report of an organization aggressively engaged in the promotion, planning and supervision of work relief labor on drainage operations, rather than in conventional health department engineering functions of approving plans and specifications. The first section deals with a narrative of work operation and description of the administrative organization. It concedes that much of the work involved conflicts with professional malaria control principles, due to extreme limitations and restrictions on public health personnel in proportion to the magnitude of the program, and to characteristic defects and restrictions of CWA and ERA program conditions primarily governed by the furnishing of minimum aid to relief cases. In spite of deficiencies, the program is endorsed and praised as having provided great benefit to numerous individual areas.

Detailed description of the duties and functions of field personnel on malaria drainage is given. Detailed description of program and project difficulties involved in the operation of work relief labor is given. Labor forces employed were almost exclusively provided by relief agencies, although this state has a prior history of malaria drainage by convicts. Work was accomplished in 110 counties, 2,500 ponds were drained, and 6,000,000 man hours of employment were devoted to the program.

The second section deals with malaria prevalence and epidemiological factors. This discussion recognizes rainfall as the principal determinant of malaria prevalency. The "Number of deaths per inch of rainfall" is computed for comparative purposes in the study of other epidemiological factors, and in evaluating state-wide effectiveness of control. Little consideration is given to total malaria deaths in the state, which it is demonstrated will fluctuate very widely in crude relation to the rainfall, irrespective of all other factors.

A normal expectancy of 8.62 deaths from malaria per inch of rainfall is established by records over a 15 year period. Death rates in excess of this normal expectancy furnish indications of variation in disease virulency, type of disease, changes in the human host, and in the failure of control measures. Rates below the normal occurrency are counter indicative.

The effectiveness of drainage in influencing the state-wide problem as well as restricted local conditions is demonstrated by a declining trend curve, and also by rate curve characteristics for 1934 which show a below normal occurrence in spite of an expected 7 year cyclic increase and by nation-wide statistics of the U. S. Public Health Service.

Secondary curves published show a lag in the up-turn of malaria deaths with increasing rainfall after the end of drought periods (see 1926 and 1932). This is attributed to the accumulated deficiency of pond storage waters, requiring extensive replenishing before marked expansion in anopheles breeding occurs, and to the reduction of carriers. Sustained increase in precipitation resulted in the accelerated increases of malaria deaths occurring immediately after the period of lag.

The relative value of malaria morbidity and mortality reporting is discussed.

Malaria control by mass drug treatment, and thick blood smear surveys are under way in the state, but are not discussed in the engineering report.

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